



The METROPOLITAN

How Metro
does it
... Page 13



The METROPOLITAN

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Sound Off

WE STILL would like to hear from you. Remember, we are your pipeline to print. A magazine can be a means toward change as well as recounting what has been. Preparing one is a guessing game about what readers might relish.

Among other things, this magazine helps look through department walls. That's what a window is.

For instance:

Some people in Parks and Protection Division say they want to be two notches (not just one) ahead of the general public, in their acquaintance with other Divisions. You too?

To reach any department's inside story, suggest a topic we might cover in future issues.

The Metropolitan will "smoke it out."

Write to The Metropolitan
Room 331, 100 Main Street, Winnipeg 1.

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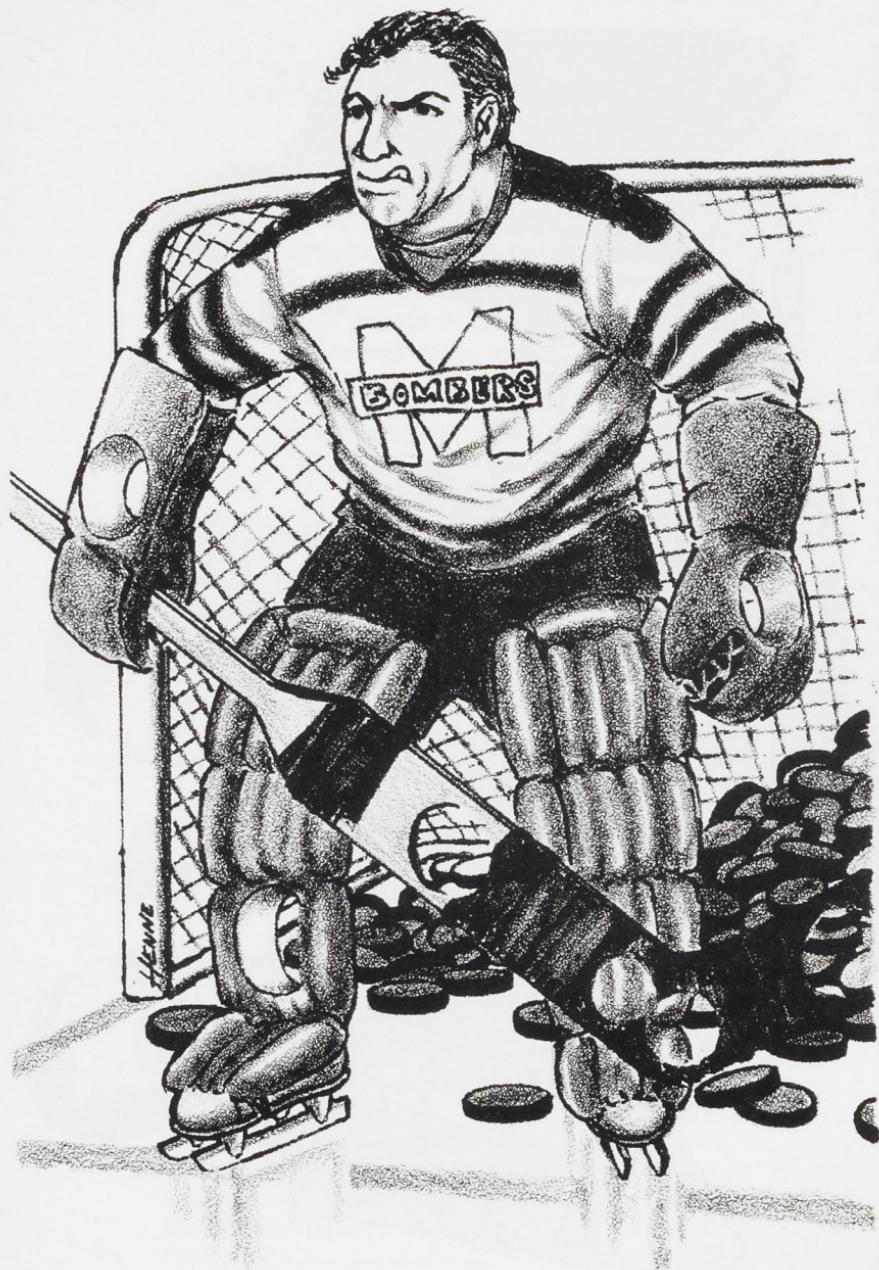
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One councillor's solution to the tax problem; Compliments of Amanuensis.

"GO FOR BROKE"



"Don't worry fellas . . . I think I'm starting to get the hang of this!"

Offside!

By Brian Armstrong



The author

IN the fall of 1962, some of us in the Planning Division decided we were going to play some hockey. They got together and had a couple of games among themselves on an outdoor rink, and liked it so well, they went downstairs and challenged a number of the inspectors in the building inspection department. Renting some ice in Transcona, they had hockey games on Saturday afternoon for the rest of the season.

It was just the Planning Division playing against the Inspection Department. Some of the players for the Inspection Department, Mike Dymitrew, Cyril Callewaert, Rudy Kreutzer, Fred Ginther, George West and Bill Chandler, constituted sort of an "old timer's" hockey team. For the youngsters of that time, we had Jack Ustashewski, Elmer Mittermueller, Lloyd White, Ray Trush, Wendell Shaw; Derek Booth, a young lawyer to be, who was working as a summer student for Metro, and the writer.

During that time, we had been in contact with the Manitoba Government and in the following year, 1963, we decided to organize a Government Hockey League which would comprise four teams. There were Public Works, Mines and Natural Resources, Education, and our Metro Employees' team. The next year we sent out a call to all the divisions in Metro for hockey players, got a team together, and entered the Government Hockey League.

That circuit held together until the completion of the hockey season in 1968. But the calibre of hockey was leaving much to be desired from our point of view. We broke with the Government Hockey League and went at it on our own.

During that time, however, we had able assistance from many members of the Corporation. He got three "disabled" players from the Assessment Division, Jerry Edmonds, Ken Macrae and Rod Huff. These three individuals were remarkable hockey players. They would never quit and sometimes they would almost check each other to death. From the Transit Department came Glen Shapanski, the Blue Bomber Special; Ed Patek, Rick Fast and a very able defenceman by the name of Rod Kidd. Rod always had a smile on his face no matter who tried to alter it on the ice. I think he probably drove the opposition crazy with that permanent smile.

From the Parks Department, Ray Prieur is another regular and an able right winger. We have two other mentionables, Lou Kwiatkowski and Jim Coleman, who came out and



Last season's (1969-'70) Metro club. Back row l. to r.: Al Johnson, Mel Shewchuk, Elmer Mittermuller, Rod Kidd, Brian Armstrong, Ray Prieur, Derrick Booth. Front row l. to r.: Lloyd White, Jerry Edmonds, George West, Ray Trush, Jack Trush. Missing: Bill Chandler, Rod Huff and Ken McRae.



And here's how we looked back in '63-'64. Back row l. to r.: Brian Armstrong, Bruce Lane, Derrick Booth, Alan Silefant. Second row: Norm Slobodian, Wendel Shaw, Elmer Mittermuller, Grant Stokel, Bill Chandler. Front row: Lloyd White, Jerry Ertle, George West, Ray Trush, Jack Ustashewski.

Action at the goal crease. Rod Kidd gets low view past George West to Brian Armstrong.



filled in when we were short handed.

From Ten Fort Street we had Grant Stokel from Treasury; Rick Harman from Accounting; and from the "old timer's" hockey team, Bill Chandler the Silver Fox; and the world's worst plumber, George West, who went into the nets for us.

During the first year in the Government Hockey League, we had a little trouble with the goalies. We couldn't seem to find someone who really wanted to stay in there too long. We even had a fellow by the name of Al Reid play in goal for us a couple of games. Al was as blind as a bat and out of his mind to go into the nets, but as far as I am concerned he did the job. Then George tripped into the goal crease one day when we were short handed and has been there ever since. He must have a real head for hockey pucks because even to this day he claims he enjoys it.

From the Planning Division, we had two able gentlemen in Bob Boughie, another right winger; and Wendell Shaw, a defenceman. In one game when we were trying to kill the last few minutes of time, Wendell took the puck behind his own net, crashed into the boards with a terrible smash and fell to the ice. He stopped moaning long enough to ask us how much time there was left in the game and when he found out there was a couple of minutes he said, "I'll just stay here for a while and we'll kill a little bit more time."

In the 1969-70 season, we had exhibition hockey against various industrial teams in Winnipeg, and we averaged about two games a week. During this time we played 48 hockey games, winning 36 of them, losing 8, and tying 4. We enjoyed the calibre of hockey because with most of the teams we played, the individuals we played against

were in much the same situation as ourselves; people who were out to play hockey for the pure enjoyment of the game and not to injure anyone, although I must admit at times some of the games got rather rough.

We had a few injuries though. There was the time Mitch (Flash) Mittermueller skated onto the ice one day and tripped over the blue line, after which someone sat on him and cracked two of his ribs. Another incident involved (Hacker) Trush. The way this guy checks you is unbelievable. When he comes in after the game he has to retape the bottom of his stick because it's in shreds from all the chopping he's been doing. My vote for the award of the year went to the heady star of the Zoning Department, Jack Ustaszewski, even if he used his head once too often and came home with a beautiful shiner.

It is amazing that most of the fel-

lows who started 8 years ago are still attempting to play hockey. The average age of the hockey players is around 30, the youngest around 27 and the oldest in his 40's and still going strong. The regulars this year were Jerry Edmonds and Rod Huff from the Assessment Division, Rod Kidd from the Transit garage, Ray Prier from Parks, Plumbing Inspector Mr. George Vezina West and six clowns from the Zoning Department (who don't know any better). Centre Lloyd White, a right winger Ray Trush, left winger Jack Ustaszewski, any position Al Johnson, with Mitch Mittermueller and me on defence.

I think if anyone is going to force the premature retirement of George West, we could be the ones. On one occasion both of us got hat tricks. Unfortunately, the last goals of the hat tricks were scored on George.

Continued on page 18

A breather for (l. to r.) Al Johnson, Elmer Mittermuller, Ray Trush, Mel Shewchuk, Ray Prieur and Lloyd White.





The Younger Set.

at least **ONCE A YEAR** we have

Bob Tibbs (Maintenance general foreman) and Mrs. Gloria Johnson (secretary, Transportation Branch).





Dance Committee members Tony Wasio (Assessment) and Harold Granke (Streets), pose with Janice Forman, Mistress of Ceremonies.

A BALL! this year it was St. Valentine's Day

Transportation Superintendent Ed Laforme and wife, Olive. More Metro Dinner and Dance photos next two pages.







*These photos tell their own story, don't they?
At left, Tom Aitchison, (Maintenance) receiving a door prize from Mistress of Ceremonies Janice Forman (Personnel Dept.).*

ALL LINED UP

By L. B. "Laurie" Fraser



Laurie at the line painter console.

Laurie Fraser is a traffic Services Section foreman. He has long experience with the lane painting program and helped to develop the specialized painting equipment. The summer months find him involved day and night in the complex operation, checking film thicknesses, paint viscosities and machine operations, as well as directing the work forces.

EVERY year — as sure as seasons come and go, men of the Traffic Services Section start all over again to restore the white lines on our Metropolitan Streets.

Why is this effort undertaken when in fact the white lines only last for part of the year? Among all the techniques of traffic control em-

ployed on our street system, perhaps no other is so effective in providing convenience and safety for the highway users. Winnipeg is fortunate in having wide streets but these same wide pavements become a "no man's land" for motorists who attempt to use them without the benefit of pavement markings.

It is common in the springtime, before the paint program has been undertaken, to witness traffic under heavy flow conditions using four lane facilities as three lane roadways or even two. The overall program to install and maintain over as long a period as possible the guidelines for moving traffic, adds much capacity to the street network.

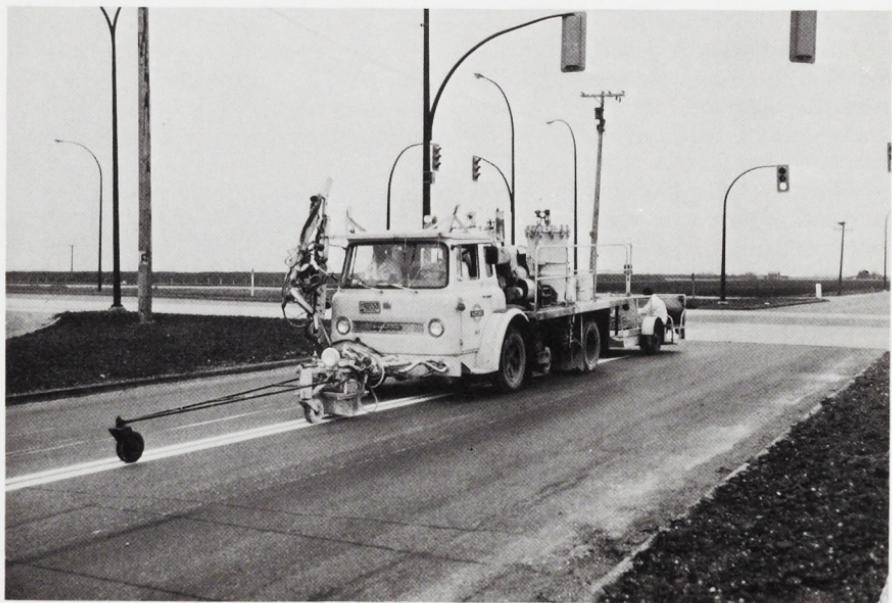
It wasn't always like this! Those nice clean paint lines don't just happen. They are the result of a considerable amount of time, effort, imagination and technical skill on the part of painting crews. Over a twenty year period of time the paint program has developed as traffic loads increased. It has taken considerable time to train operators, working with rather complicated equipment.

Prior to 1948 when the first Traffic Engineering Branch was formed under the City Engineering Department, all street painting was accomplished with a small hand operated paint machine under the direction of the City Police Department. Painting at that time was confined to only eight major intersections and to placing lane lining on the immediate approaches to



The large truck, with 6 man crew, operates mostly by night . . .

. . . but also by day.



Portage Avenue and Main Street, Memorial Boulevard and Portage Avenue, and Main Street and Higgins Avenue.

This program was expanded in the late 1940's to include a total of fourteen intersections and complete lane lining on Portage Avenue between Main Street and Memorial Boulevard and on Main Street between Higgins Avenue and Assiniboine Avenue, and this program was undertaken twice every year. In 1950 a further step was taken when a small self-propelled paint machine was purchased and the program expanded to include approximately forty intersections and some of the major arterials in the City of Winnipeg.

During the 1950's, vehicular traffic increased substantially. Many traffic improvements were undertaken such as the implementation of one-way street systems, and the installation of more traffic signals. With each of these, came a further expansion of the painting program.

In 1961, the Metropolitan Corporation was formed and the responsibilities of the Traffic Operations Branch expanded considerably. In that year a self-propelled machine of the very latest design was acquired. It was capable of applying two lines simultaneously and had a capacity of ninety gallons of paint.

Today the program has expanded to the point where approximately 200 miles of street are painted on the average, twice a year, utilizing some 10,000 gallons of paint. The total cost of this program amounts to over \$60,000.

By 1965 it became evident that the existing equipment could not possibly keep pace. In 1966 a truck-mounted pavement marker was developed, utilizing a three ton

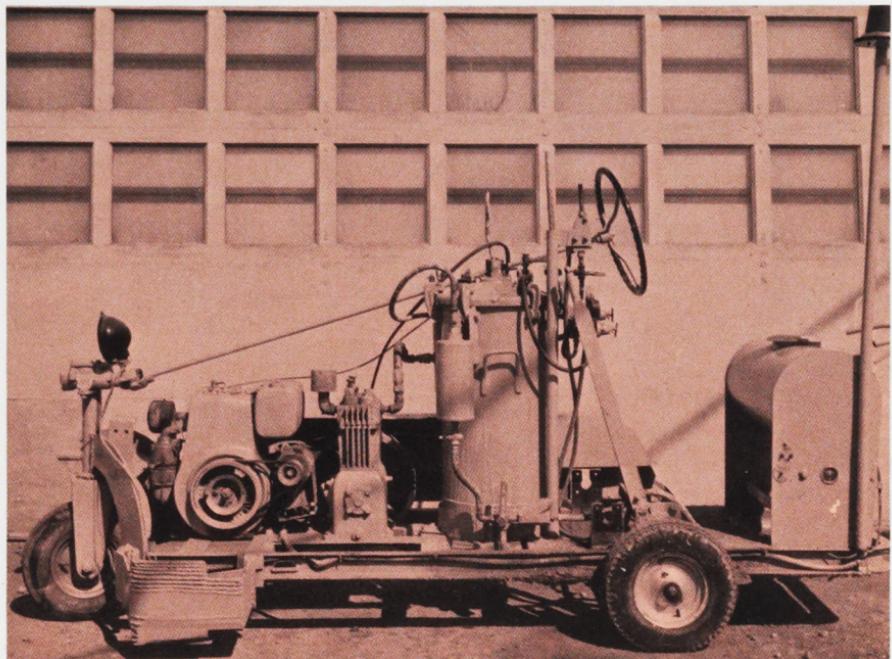
truck chassis which carries the paint spray equipment and paint supply (approximately 200 gallons). The unit has an automatic transmission and retractable outriggers holding spray guns in a position in front of the operator as well as a second position on the right hand side of the truck. This unit can apply three lines simultaneously, not necessarily all of one colour.

Experience has shown that considerable efficiency can be obtained by applying the paint at a temperature of 75° and the new unit is equipped with electrical heaters which automatically hold the paint at this temperature. This technique has permitted extension of the painting program into cooler months and produces a much more uniform application of paint.

A crew of six men is needed. In the cab with the driver an operator controls through a series of switches, the actual paint application. At the rear of the truck two men distribute traffic cones onto the freshly marked lines to protect the fresh paint. The unit is followed by a truck and more men to retrieve the traffic cones.

The street painting program can be divided into two general categories. The longitudinal lane lines represent one phase of the program. The other is the painting of intersection markings at signalized intersections and pedestrian corridors. Each of these has particular problems.

Springtime's first job is the "pre-marking program", to provide guidelines for the machine operators to follow. This work used to be done by a three man crew utilizing a tape measure and a can of paint. That was time consuming. Sometimes the work effort was lost. Weather conditions completely



Self propelled units added sophistication, maneuverability.

obliterated the marks before the paint machine could be utilized.

In 1968, the Traffic Services Section developed a pre-marking machine to replace this hand work. The equipment consists of a spray gun mounted on a front bumper of a small truck, guided down the street by a marker on the left hand side of the truck, which follows the curb line of the center median. This machine can operate successfully at approximately 15 miles per hour.

Street painting takes place under both daytime and night-time conditions. In the Downtown Area and on very busy streets the work of street painting must be curtailed to night-time hours. However, during the early Spring when night-time temperatures are still low, experience has shown that there is benefit to

painting during daytime hours in the outlying areas. The public, unaware of the reason, has criticized the Department for painting streets which do not appear to have the same high priority as those in the Downtown Area.

The paint crew follow either old paint markings or in their absence, the pre-marks described above. The operator must insure that the paint is applied uniformly. The painted segments of the line are ten feet long at 20 foot intervals. Two lane lines may be applied simultaneously. Since each roadway has its own particular characteristics the width of the lane between lines can and does vary from place to place and must be constantly checked by the operator.

Present practice calls for a paint

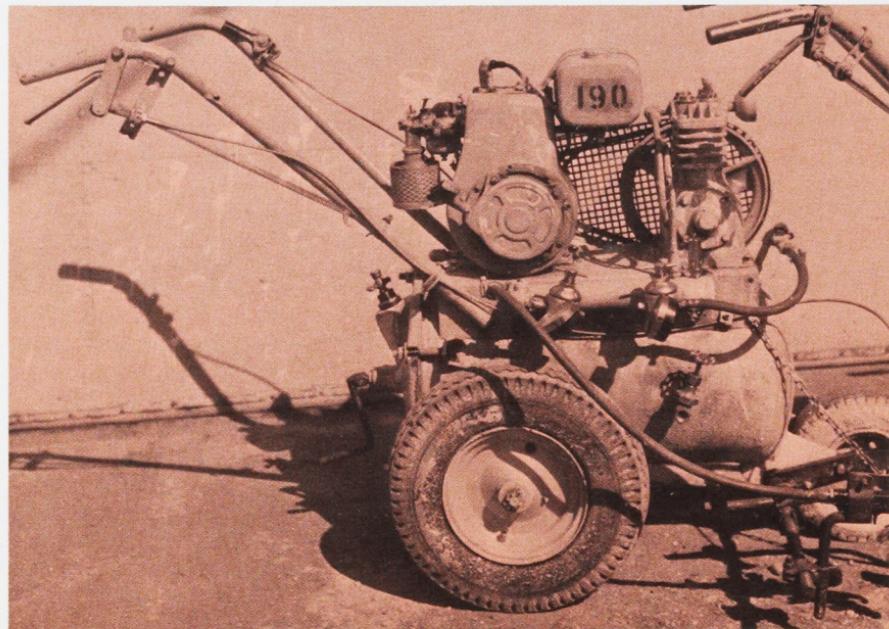
application of 15-20 mill thickness. This provides the longest lasting job. In out-lying areas where street lighting is either non-existent or at a very low level, glass beads are applied with the paint at a rate of approximately six pounds per gallon. These small glass spheres reflect the light from vehicle headlights and greatly increase the effectiveness of the lines at night. The large lane-liner can apply 200 gallons in an eight hour shift. The operation is almost continuous and paint is transferred from the extra 45 gallon drums carried on the truck into the pressure tanks by means of a transfer pump.

Concurrently with the lane lining program, five two-man crews are busy painting intersections and pedestrian corridors. Each crew has a truck and a small push-type paint

machine. Each intersection requires such detailed attention that engineering drawings are provided. The intersection may involve complicated street geometry, special use of certain lanes, special locations for stop lines and crosswalks and the operator must mark out the intersection with a chalk line very carefully before proceeding with the job.

Considerable attention is given to the question of the paint product itself. All of the major paint suppliers are invited to submit samples of their products. These are applied to an asphalt surface and a concrete surface in a test panel and the results of each sample are carefully analyzed throughout the summer months. One 1970 test area is on Pembina Highway south of Corydon Avenue. Experience has shown that in the Winnipeg area, a chlori-

Push-type machine is right for intersections, crosswalks, corridors. Operators are said to have aversion to lawn mowing.



nated rubber-base paint is the most satisfactory.

Paint lines on asphalt surfaces last at least twice as long as paint applied to a concrete surface under similar traffic conditions. In general, the problem appears to revolve around the question of adhesion of the paint to the road surface itself. Research into this aspect may yet stretch the life of lane lines.

During the busy summer months, each of the permanent employees in the Signs and Markings Section becomes a paint operator. Summer students are employed as helpers for the men, creating a total of 12 work crews. Under a crash program, the first paint application can and usu-

ally is largely completely by mid-June of each year.

Work schedules must be closely controlled in connection with activities of other work forces such as pavement crews, street cleaning operations, and watering of center boulevards. The most carefully scheduled program can be completely destroyed by a summer shower.

Life has other black moments for painters of white lines. There are the times a vehicle driver nullifies their whole effort by travelling down the freshly painted line, scattering traffic cones and paint in all directions!!

OFFSIDE *Continued from page 8*

Bad enough, but the same tilt, while playing out usual tremendous game on defence, we missed our intended body checks and cross checked George.

Stout hearted Vezina West only replied, "Gosh darn it fellows, you shouldn't go that."

In closing I would like to thank Mr. Rudy Kreutzer on behalf of the Metro Bombers for taking time to come out and referee as many games as he did. He certainly did a wonderful job and made the games more enjoyable for everyone concerned . . . (P.S. . . Bill and George are going to buy him a rule book next Christmas.)

It's A Small World!

Bus Driver Howard Birch was recently called out after midnight to the Red Cross Blood Donor Clinic to give an emergency donation. In the next bed, and called out for the

same emergency donation, was Bus Driver Bill Baker!

PAINTING EQUIPMENT

The paint equipment utilized by the Metro Traffic Operations Branch comprises the following:

- 5 small push-type crosswalk machines
- 1 self-propelled lane liner
- 1 truck - mounted lane liner which may be described as follows:

The basic unit is a three ton cab over engine truck chassis equipped with a flat platform on which is mounted the paint equipment. This comprises two pressurized paint tanks, a 150 cubic inch compressor and auxiliary equipment for heating the paint, stirring the paint and transferring the paint from extra drums into the paint tanks; paint hoses, air hoses, and many gauges to control air pressure, etc. The interior of the cab has a bank of dials and switches for control of the actual painting application.



"You park in YOUR lot . . ."

The Fine Hand of the Law

A "CORPORATE" CONTRIBUTION

WHEREAS this Corporation
is at the 'beck and call'
of the city's population;

AND WHEREAS the Law Department
is at the 'beck and call'
of the above-said Corporation;

NOW, THEREFORE, this article witnesseth
of the legal staff's temptation . . .
(a) to submit their resignation;
(b) to change their occupation;
were it not for the following aspirations:

1. GENERAL

To uphold the law
('tis a noble ambition),
To stamp out corruption
('tis a difficult mission).

2. AGREEMENTS, CONTRACTS

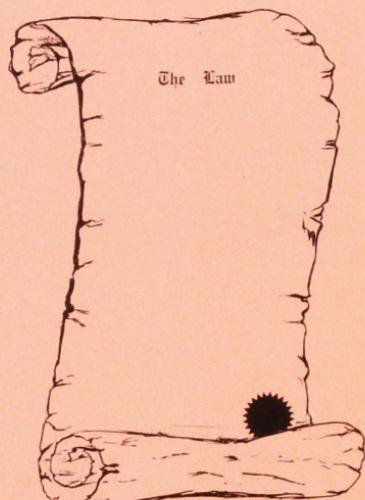
To prepare agreements
(that will hold and bind),
To explore every contract
(with a clear, agile mind).

3. ASSESSMENT APPEALS

To handle Appeals
of Assessment (with tact),
To verify that taxes
remain a cold, harsh fact.

4. BY-LAWS

To draw up new By-laws
(law-breakers are fools),
To protect society,
there must be rules.



5. CLAIMS

To appease the claimant
(who has slipped in the bus),
To manage a settlement
(not **too** generous).

6. COLLECTIONS

To plead and cajole
(to collect accounts due),
To send stern, biting letters
(failing that . . . to sue!).

7. COURT ATTENDANCES

To attend at the Court House
(to disprove allegations),
To defend the rights
of the Metro Corporation.

8. EXPROPRIATIONS

To evict . . . (this is progress!)
for expropriations,
To show proper concern
(grant cash consolations).

9. PROSECUTIONS

To urge permit purchases
(thus avoid prosecution),
To Summon offenders,
to make restitution.

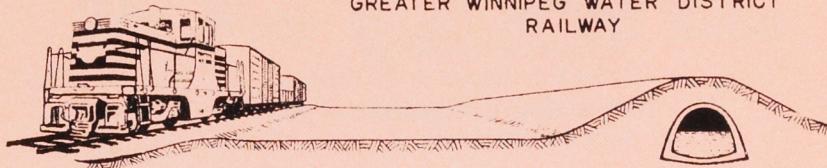
IN WITNESS WHEREOF the legal band
has hereunto set its seal and hand,
affixed on this sheet (with lots of love),
on the day and year first written above.

“John Doe”

(Witness)

“The Law Department”

—Submitted by Mrs. L. Kehler

GREATER WINNIPEG WATER DISTRICT
RAILWAY

Who needs their own railway? The GWWD did—to help build the Shoal Lake aqueduct to Winnipeg, then safeguard our pure water supply for the next fifty years. And there are side benefits too. Metro finds the railway still worth keeping. The customers agree.

WATER LINE RAIL LINE

CONSTRUCTION of the eighty-five million gallon a day aqueduct to Winnipeg from Shoal Lake on the Ontario-Manitoba boundary, a distance of 97 miles, was a tremendous undertaking. It was decided that a railway would have to be built to convey men and materials to the work sites, many of them swamp and muskeg.

In 1914, the Manitoba Legislature authorized the Greater Winnipeg Water District to build and operate the railway.

Construction of a standard gauge railway on the aqueduct right-of-way, was started and a parallel telephone line was put up to control train operation. The grade was built up entirely from side borrow and for several miles this consisted of nothing more than peat, particularly on the height of land separating Lake of the Woods watershed from the Lake Winnipeg drainage area.

Gravel pits were found at intervals along the route and the work of ballasting was about 80% complete at the close of the 1914 working season.

The following two paragraphs are a quotation from a report by Mr. W. G. Chase, Chief Engineer of the Greater Winnipeg Water District and subsequently President and General Manager of the Lock Joint Pipe Company:

“The construction of this railway was a ‘sine qua non’ of the successful building of the aqueduct. The country traversed was virgin land between Miles 40 and 96, and nearly altogether swamp covered. No highways were available for the transport of material for construction, nor could any be built cheaply. Railway transport was recognized immediately as the key to rapid construction of the aqueduct.”

"The railway has also been recognized as essential for maintenance of the water supply and it has behooved the management of the Water District, since they must operate the railway, to encourage the development of the natural resources along the route. The settlement of this land is being encouraged and it is not unlikely that at an early date the railway as such may be considered a self-supporting entity."

The magnitude of the construction haul is indicated by the following. Over one million cubic yards of sand and gravel were moved and over 600,000 barrels of Portland cement, in addition to the distribution of contractors' plant and the transport of passengers and supplies.

When construction was completed there was little settlement in the territory traversed by the railway, but the people who were there petitioned the District, asking that the District use the railway to transport them and their goods to and from St. Boniface. Accordingly, as foreseen by Mr. Chase, and to accommodate the settlers, the decision was made to operate the railway as nearly as possible as a self-supporting operation.

The original railway terminus was in the C.N.R. Paddington Yard, with passengers boarding the train at the C.N.R. St. Boniface Station. When the decision to maintain and operate the railway was taken, seven additional miles of trackage were built along the right-of-way from Deacon to the present terminus in St. Boniface. Shop and terminal facilities were moved from Deacon to the new site.

In 1929, the existing railway station was constructed, entirely of granite quarried along the District's line.

An effort was made to develop enough volume of revenue business to defray the costs of the railway. This aim was not entirely realized in the years prior to 1950.

Originally, forest products were the main source of revenue. As late as 1935 there were over 35,000 cords of firewood in the St. Boniface Yards. This wood was cut by City of Winnipeg people on relief and distributed by the City of Winnipeg to needy families. The last of this wood was disposed of about 1952.

The old woodyard is the site now leased from Metro by Supercrcrete Dawson Road Concrete Plant to process gravel hauled by the railway.

As the firewood demand became less, the market for pulp and paper developed. Cars of lumber were shipped to distant points in the U.S. and naturally the District obtained all of its own tie requirements from along the line.

Today, timber within workable distance of the railway has been largely depleted, and for the last twenty odd years, the main source of revenue has been from hauling gravel.

The District operated its own gravel pits to supply aggregate for construction of the aqueduct, and it was a natural step to retain this facility for the benefit of the District's member municipalities. Gravel was obtained from District pits and hauled to St. Boniface, where it was dumped into bins from an elevated track. Municipal vehicles were loaded from chutes beneath the bins.

As technology advanced, demand for a more uniform quality of gravel increased and the District constructed a processing plant at the Dawson Road site. Gravel for this plant was dumped from the existing highline and pulled into the elevator with a Saurman-type scraper. Pro-

duction was limited to approximately a thousand yards per day.

As the Greater Winnipeg area developed, the demand became less and less for road gravel, and more and more for concrete aggregate. This trend has continued until, in recent years, there is little demand for gravel as such, the requirement being for a carefully graded material to meet the requirements of high strength concrete aggregate.

By 1957, the District Management, recognizing this trend, had entered into a contract with one of the large concrete firms for the supply of gravel. The District pits at Ross were turned over to the Contractor who, in turn, constructed a gravel crushing, screening, washing and classifying plant on District property at Mile 39. Additional gravel was obtained from

private and Crown leases in the area.

The Contractor was also given a lease of the old woodyard property and has constructed a modern concrete batching plant and precast facilities.

Seasonal hauls have gradually crept up to a maximum in excess of 400,000 yards, or over twenty million revenue ton miles.

By 1969 the available gravel at Ross Pit had been depleted and a new pit was developed in the same area.

The Railway, as it now exists, has 92 miles of main track and is divided into four sections for maintenance purposes, each one having an equated 25 miles of trackage, including main line and others.

In the early 1950's the District, in collaboration with the United



In the raw, roadless territory east south-east of Winnipeg, rail line construction gave future access plus a work-base to build the aqueduct.

Grain Growers, developed a spray car to control the growth of brush along the right-of-way. Track sterilization was started the following year, but was so expensive that only one-third of the line could be done annually. Currently, the entire main line is maintained weed free under a three year contract.

Brush clearing for some years was done by hand under the Winter Works Program. In this way, some of the money was returned to settlers along the line. However, at this time, consideration is being given to doing this work with chemicals.

There are six timber bridges on the line, ranging from two spans to eight in length and from a nominal 12 feet to a maximum 30 feet in height above the stream bed. There is one steel deck plate girder Bridge of two spans on concrete abutments and pier and one prestressed concrete structure some 800 feet in length, completed in 1967, to carry the railway over the Red River Floodway. This structure is the first of its kind to be used in railway service in this area.

Gravel trains are operated to a maximum of six per day. These leave St. Boniface, go to the pit, some 40 miles distant, get their load from overhead pneumatic hoppers and return to St. Boniface, dumping at the highline. This trip is normally accomplished in eight hours. The gravel season normally starts late in April and if necessary, continues into the latter part of November. As each train normally makes two trips per day, the car utilization factor is excellent.

Because of the prevailing downward grade from the pit towards St. Boniface, the locomotives are able to haul the same number of empty cars eastbound as loads west-

bound. In fact, the loaded trip westward from Mile 39 to St. Boniface takes 10 minutes less than the eastward trip.

District trains are normally operated with a two-man crew, an Engineman, who is in charge of the train and receives the orders by radio, and the Trainman at the tail end. Only on special trips where there is a lot of switching is a third man added to the crew. Dispatching is done from the St. Boniface Station via two-way radio to the head end of the train.

On passenger carrying trains, the Conductor is in charge of the train and is the senior crewman.

Originally, the Water District employed conventional steam locomotives of the Mogul type. Another small engine was used to take the gravel cars up the highline for dumping into the bins.

Water tanks and coal loading platforms were maintained at frequent intervals along the line to facilitate the operation of the steamers. Since dieselization of the line, these have been removed and with the successful use of radio, the District's telephone line was abandoned.

In 1949, the District acquired its first diesel locomotive. This was a twin engine 44-ton GE unit, developing 380 horsepower, manufactured in 1949, was acquired the next year, and in 1954 a third unit, manufactured in 1946. A second similar unit, was acquired. All of the units have been modified for our service by the addition of new heads, bringing them up to 400 cooling for the traction motors for road service. They have safety operating alarms, and "dead man" controls.

The last steamer was made ready for emergency use during the 1950 flood, but was not, in fact, operated.



Much terrain through which the railway and aqueduct were to pass proved to be a boggy quagmire of peat. The answer was heavy ballasting with gravel found nearby.

This unit was sold to Manitoba Sugar Beet Company to replace its predecessor, which had become unserviceable and which they had bought from the District several years previously.

In addition to the three locomotives, Metro's railway owns and operates 29 chain dump cars, 47 power dump cars, 18 pieces of maintenance of way equipment, 1 Mack Diesel electric coach, 9 self-propelled cars, 4 passenger coaches and 1 combination coach, 21 general service flats equipped with side pockets and hinged side doors, 3 road cabooses and 3 box cars.

A gravel train consists of a locomotive, 30 gravel cars and a caboose and hauls 700 yards. Some of the gravel cars are dumped by gravity when their restraining chains are knocked off. Others are dumped

pneumatically. In both cases the cars are returned to the horizontal by air pressure.

The District railway has its own maintenance of way and operating rules, which are essentially the standard railway rules, modified to suit our operating conditions and to include radio dispatching. All normal maintenance of prime movers and rolling stock is performed in the District's Shops.

With the proclamation of The Metropolitan Corporation of Greater Winnipeg Act in 1960, the Greater Winnipeg Water District ceased to exist, and its facilities were taken over by the Metro Corporation. However, the railway continues to operate under the Greater Winnipeg Water District name, owned and operated by The Metropolitan Corporation.

WHAT IS WATER?

The chemical formula H_2O describes water, meaning that one molecule of water contains two atoms of hydrogen (H) and one of oxygen (O).

Water plays a significant role in the make-up and function of our bodies. For example, even our bones are almost one-quarter water, muscles about three-quarters and blood serum 92%. Our saliva is almost all water.

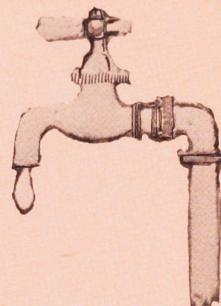
Water accounts for almost 70% of the normal human body, contained in microscopic "wells" or the tiny cells of our living tissue. Thirst occurs when the loss of water is greater than the intake.

It is estimated that the average person needs a quart or more of water to make up for these losses every day. The daily loss of more than half a quart is unnoticed because it goes out from the skin (as perspiration) and in breathing.

Water enters our bodies not only when we drink, but also when we eat. Many people do not consume enough water to keep in top condition.



MAKING GOOD WATER Better



Every year, we use more water per person. The Shoal Lake aqueduct's capacity to supply Greater Winnipeg can be extended some years by reservoir storage near the city. To assure high quality of the stored water and even improve the present "product", is the object of research at the Hurst reservoir.

INCREASING population, together with increasing household and industrial use of water, means that Metro's Waterworks and Waste Disposal Division is being called upon to supply Greater Winnipeg with more water, especially in the hot summer season.

With three major pumping stations and 59.44 miles of arterial feedermains, the distribution of water within the area can be accomplished without any problem, even during the peak requirements experienced in very hot, dry weather. At no place in Metro's feedermain system nor in any of the municipal distribution systems did water pressures sag to the critical level, despite unprecedented demands.

Not since the record dry spell of 1961 have such quantities of water been required as in 1970. On August 11th, 12th, 13th and 14th, the capacity of the main aqueduct from Shoal Lake was exceeded, with the three reservoirs in Greater Winnipeg

being called upon to supply sufficient water to augment the aqueduct capacity. Aqueduct capacity is 75 mgd and on August 14th, 81.2 mg were pumped into the system for use by industry and householders.

The Division has now completed plans for the construction of a very large terminal reservoir at Deacon Corner, just east of Greater Winnipeg. A series of four earthen cells, each with a capacity of about 350 million gallons of water will be constructed over the next 10 years. Each will take two years to build and it is hoped to start the first cell next spring in order to have it in service in the summer of 1973. With this large volume of water on the outskirts of the City, Winnipeg will no longer be depending on a single 97-mile long, 50 year old pipeline for all its water.

One problem being solved is the possible deterioration of water quality which may take place during long term storage of this large quan-

ity of water. Also of concern is Shoal Lake algal growth, which means off-tasting water during certain periods in late summer.

In order to provide water which will be clearer and better tasting for residents of Metro Winnipeg, the Division has been conducting pilot studies in water treatment at the Hurst Reservoir for the past several years. This year's project was operated by two engineering students under the watchful eyes of the Division's Design Department and Research and Control Department.

At the Hurst site, one of the forty million gallon reservoirs was divided into two cells by a rubber curtain. The water in one cell was untreated, while copper sulphate was added to the water in the other cell. Water was pumped from the aqueduct into each cell and stored for twenty days. This storing of the water simulates a proposed twenty day retention, which is the maximum length of time that water would be held in the Deacon Reservoir.

As most of the color, taste and odor in our water is believed to be a result of the presence of algae, the principal aim of the project was to establish the most efficient means of algae removal from our water supply. A three-stage system, comprised of a microstrainer, an ozonator and two types of filters, showed positive results in the Hurst reservoir tests.

In the microstraining process, the water must pass through a rotating steel mesh screen. As the water passes through the screen, a large percentage of the algae and other matter in the water is removed. The screen is backwashed each revolution, with the backwash water being collected in a hopper and going to the sewer. An ultra-violet light is

used to kill any bacteria which may form on the screen.

After microstraining, the water is pumped into a twenty foot high, rocket shaped column. In this column, ozone is bubbled through the water. *Ozone is produced by passing dry air between high voltage plates. As the electric current jumps from one plate to the other through the dry air, ordinary oxygen in the air is changed to form ozone.*

As ozone is a very powerful oxidizing agent, it reacts with any particles in the water, including algae. Although ozonization does not remove a great deal of the algae from the water, it does *remove most of the color, taste and odor*. The result is a cleaner, clearer water with very little taste or odor and a slight blue sparkle. Ozone has also been proven to kill bacteria and viruses which may be in the water.

The final stage of the process is filtration by either a sand filter or a charcoal and sand dual-media filter. The filtration process removes any algae or cloudiness remaining in the water after ozonization.

Samples are taken before and after each individual process, thus enabling the performance of each piece of apparatus to be evaluated. It is hoped that the results obtained at the Hurst site will be used to improve the quality of Winnipeg's water in the near future.

Meanwhile, the construction of the reservoir should ensure continuing adequacy of supply, with no water rationing in the foreseeable future, provided no catastrophe occurs along the 50-year old aqueduct from Shoal Lake.



PARKS FIRST AID

Maybe not under every bush, but somewhere nearby in Metro's 2,000 acres of parks, a qualified first-aider.

SIXTY-TWO employees of Metro's Parks and Protection Division this year completed 16 hours of instruction and practical training in first aid. The course was conducted by a staff member of the Division who is a qualified St. John Ambulance Society instructor — Emergency Measures Officer Ian Macpherson.

Councillor A. N. Robertson, Chairman of the Committee on Parks and Protection, presented certificates and badges to the men and women who successfully completed the course, at a brief reception held in Peguis Pavilion, Kildonan Park. This brings to 90 the number of employees of the Parks and Protection Division who are trained to administer first aid. Of this number, 37 have also received practical training in basic rescue skills.

In making the presentations, Councillor Robertson noted the greatly increased use of park facilities in recent years, particularly during the winter months, and the inevitable increase in accidents as a result. He said that it was extremely gratifying that so many employees recognized this fact, and also recognized the importance of first aid training in order to provide greater service to the public.



Zoo keeper Don Verwey receives his certificate from Councillor Andrew Robertson, Chairman of Metro's Committee on Parks and Protection.



Here are the Parks and Protection Division's 1970 first aid certificate holders—more meaning for the word "protection" in the name. Modest mustached man, left background, is Instructor Ian MacPherson.

DID YOU KNOW?

Congratulations to the following employees on their achievement, with special mention to Sgt. Harvie Johnson, Kildonan Park Police, who received the highest mark in the final examination:

Bill Breach	Theresa MacKendrick	Ed Miklash
Gerry Hourd	Gladys Bowthorpe	Gary Dempster
George Karagity	Cor Janson	John Jansen
Ed Phillips	Erwin Smolinski	Harvie Johnson
Mike Rebec	Don Verwey	Charlie Schlack
Frank Whitehead	Gordon Ayerst	Steve Predinchuk
Gerry Deurbrouck	Wally Chimilar	Dave Jenkins
Vic Dewar	Bob Corbitt	John Jarman
John Gardner	Lou Kwiatkowski	Leo Moniot
Len Garrett	Wally Salamandyk	Gary Martin
Roy Janz	Bob Duch	George Bell
Albert LaPointe	Steve Green	Lawrence Wallberg
Charlie Rousset	Mike Lasota	Vic Giesbrecht
Bert Scammell	Gord. Montgomery	Frank Urbanski
Alex Yasinsky	Jim Ricker	Tom Dykes
Alex Hyworren	Gunnar Albak	Bob Sutherland
Don McKinnon	Leon Bourrier	Nick Poshtar
Ken Nisbett	Mike Chimchak	Peter Vogels

The participants, all volunteers, were from the following branches of the Division:

Administration	Golf Courses
Assiniboine Park District	Kildonan Park District
Assiniboine Park Conservatory	Landscaping & Nursery Branch
Assiniboine Park Zoo	Mosquito Abatement Branch
Construction and Maintenance Branch	St. Vital Park District
	West Central Park District

THE first horse car operated in regular service by the Winnipeg Street Railway Company on Oct. 21, 1882. The company utilized four cars. During the winter, sleighs were operated. Twenty horses were stabled at Fort and Assiniboine in those early years.

The first route ran from Fort Garry (Broadway & Main) to the City Hall. It was shortly extended north to the C.P.R. tracks.

In 1883 a track was laid along Portage Avenue, with the service being extended to Kennedy Street on November 11th. In 1884 the service was further extended along Kennedy Street to the old Parliament Building at Kennedy and Broadway. The same year a further extension was made north on Main Street to St. John's Avenue.

The honour of driving the first street car (horse drawn) went to a Mr. James Wilson.

On July 26, 1892 the first electric street car operated on Main Street with motorman William MacDonald at the controls.

Skiing the High Country

by Ralph C. Baker

*Senior Draftsman, Planning Division
(member Canadian Ski Instructors' Alliance)*

TYPICAL of any longstanding and self respecting skier, my output of adrenalin accelerates alarmingly with the first chill winds of October and gushes unabatedly until the culminating event of each winter's skiing — the annual spring trek to the high country and rebirth of the skier's soul. During the past eighteen winters, the inevitable call of the mountains has drawn this writer to many ski spas in Ontario, British Columbia and Alberta in Canada and Minnesota, Wisconsin, Montana, Washington, Idaho, Utah, Wyoming and Arizona in the U.S.A.

The mountain areas offer all things to all skiers from novice to expert, from the "bunny slopes" to "skiing-the-steep" and the ultimate in skiing — knee deep, untouched light powder snow found in the high country above the tree line and clouds at elevations from 8000 to 12000 feet above sea level.

Due to the climatic conditions, some of the finest deep powder skiing is to be found in the Canadian "Alps" and it was there my wife and I chose to return last March. Following some unpremeditated and frantic packing (what do you do with two left ski gloves, three odd stretch socks and a pair of goggles for which you forgot the interchangeable lenses?) we left Winnipeg late in the afternoon of Friday, March 13th (which in itself should have been warning enough)

after depositing our two small daughters and two large dogs with



understanding neighbors and kennelmen.

One new fanbelt, five quarts of oil and 1000 miles later we arrived at Canmore, Alberta on Saturday evening, bedding down in the local hostelry (should have been tabbed "revelry") in the shadow of Mt. Rundle in a town reminiscent of a very old lady in a mini-skirt, of an earlier era of rough and ready mountain men (and women).

In the early light of morning we drove into the now quiet streets of Banff town, accompanied only by the blowing Mars bars wrappers and the occasional drunken residual of Saturday nite's revelries at the Mount Royal emporium, famous for its amber sandwiches, which is con-

veniently located to the bus terminal (see any connection?). Following a hearty breakfast of crackers, ketchup and soup (can't ski on full stomach) we ensconced ourselves in one of the shiny 40 passenger buses routed to Sunshine Village, lying some 25 to 30 miles southwest of Banff at 7300 ft. A.S.L. via a winter road that now seems like a highway by past standards.

The trip up took me back some sixteen years when the journey was indeed a perilous one in a single, broken-down four wheel drive van



equipped with a survival kit (three band-aids and 2 cue-tips), an empty 30-year-old fire extinguisher and piloted by a badly hung-over bus driver with a heavy right foot, who had never heard of a good mouth-wash. His chief claim to fame proved to be the brakeless shepherding of 30-ton logging trucks down mountain trails while under the influence of Old Granddad potion and a curseful prayer.

In those bygone days the road was one way only, subject to rockfalls, washouts, unbelievable hairpin turns and the odd near-sighted mountain goat. The hairpin turns were negotiated to the accompaniment of a wild clashing of gears, momentous flailings of tire chains and incoherent growlings of our befogged driver upon whom we be-

stowed great faith and devoted loyalty and another bottle of Old Granddad for the journey back down to Banff.

Back in the present — on arrival at Sunshine Village I was surprised to see the tremendous development that has taken place, the sophistication of the lifts, lodges, chalets, ski school and clientele — no longer the earthy, non-affluent baggy pants crowd! Quite a change from the old log cabin style lodge I had known, where we used to crawl onto the snow from our second storey windows for an early morning run up the slope, clad only in longjohns; or watch the twilight chase of the chambermaids by the virile young instructors; or the long climbs up Mt. Brewster, Mt. Standish or far-off Mt. Assiniboine, aided by a slab of mouldy cheese, cheap wine and some crusts of bread donated by our loving cook.

Today, excursions up into these lofty heights, no longer need involve hard slugging along endless valleys and up precipitous and often dangerous avalanche slopes, but can be negotiated by Tucker "Sno-Cats" or helicopters operated by Okanagan Helicopters Ltd., (who supply your mountaineer guide also) out of Revelstoke, B.C. People like ourselves are now able to enjoy more downhill skiing with less climbing, to enjoy the seemingly endless runs in untouched knee-deep powder, and enjoy it we did!

These six passenger 'copters operate up to 12,000 ft. A.S.L. so are more than adequate to exploit the wonders of areas untouched by man, the lonely but beautiful places that few have seen. The views are indescribable and on a clear day it is possible to see up to two hundred miles — into Idaho, Montana and Washington States. Our

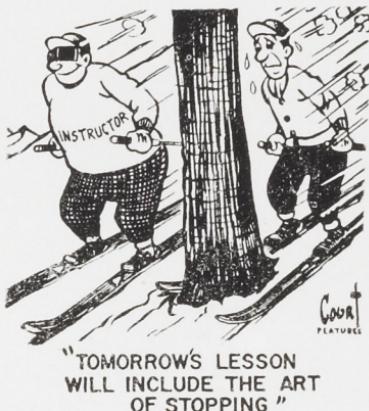
appetites thus whetted, we are not to be denied future trips into the untrod high places that beckon from Banff to New Mexico.

As time passes, the expense of the helicopter will decline and the areas in Banff and Jasper Parks will be so well charted that hiring of mountain guides will be no longer a legal necessity, making these wonderland areas accessible to all those with the inclination and ability to ski both the "steep and the deep."

The journey over the mountain crests and through hidden valleys offers unparalleled views and mouthwatering expectations of the impending plunge down the northern face of Mt. Assiniboine (elev. 11,825 ft. A.S.L.) some 25 miles south east from Sunshine Village. Helicopter disposition at the 10,800 ft. elevation ends a spectacular flight of about 30 minutes (that several years back used to take us the best part of a day) leaves you fresh and alert. What confronts your bedazzled eyes is the infinite vastness of the slopes unfolded before you, humbling one and all — potential runs up to 8 miles in length dropping over 4,500 vertical feet over wind sculptured ridges, cornices and knee-deep fly powder.

Quickly securing our skis, the group jetted off with a yelp behind the guide in wild anticipation of a unique feeling of the knee-deep snow welling up to the chest in plow-like fashion, trailing a rooster tail that tickles your back as it crawls up in turbulence behind, created by 40 mph speeds and necessitates the use of goggles for those behind. The vast untreed snow bowls allow one to wander at will in unfettered ecstasy, crossing each others trails in figure eights and crosses like a huge game of tic-tac-toe.

With two or three stops to adjust to altitude loss and take in the scenery, the heady downward plunge consumed 15 or 20 minutes followed by two more flights up to the heights and down the sunny eastern face, each one better than



"TOMORROW'S LESSON
WILL INCLUDE THE ART
OF STOPPING"

the last. But alas, all good things end — our faithful pilot awaited to propel us back to the land of hamburgers and lift lines, ski bunnies and chalets like a giant whirling time machine. Those great rocky sentinels out there are symbols of past, present and future just waiting to be conquered.

After ten days in this Banff heaven, we checked into other ski areas in Banff National Park and Montana, west of Glacier National Park. It revealed somewhat poorer ski conditions due to a thawing spell and below normal mountain snowfall during the entire winter at the lower altitudes, some areas prematurely closed. Thus we were forced by depleted funds and snow-lack, to point our noses eastward and reluctantly watch our beloved mountains recede into the West.

As one famous soldier said "we shall return" and return we shall — it's the big Rockpile for us again next year.



Tip from the Pro

*By Al Patterson,
Golf Professional,
John Blumberg Golf Course.*

Al Patterson, course professional, with Mark Eidsvig, assistant. The clubhouse at John Blumberg Golf Course has an Assiniboine riverside location and amenities ordinarily associated with a private club, plus a special transferable package deal on green fees.

DOES this sound familiar? Your son wants to learn to play the drums; your daughter is taking dancing lessons; and your wife is going through the course at a Driving School for the third time. I imagine most families are familiar with the services provided by professional instructors.

However, when a person takes up the game of golf, friends, acquaintances, neighbours, or just anyone within reach, may be asked for advice on how to play the game. The last one considered is usually the Golf Professional, who is supposedly the expert, like the music teacher, the dancing instructor, and the driving instructor.

Most beginners approach golf as a simple game, like checkers or croquet. After they play a few times they soon realize there's a little more to it. But still they refuse

to seek professional advice. Everyone seems to think he knows what he's doing wrong and they continue to aggravate themselves, lose golf balls, and annoy and endanger everyone around them on the course with their wild shots and wilder tempers.

If the above description fits you, why not consider another kind of driving instructor — the Golf Professional? There are about 20 in Metro Winnipeg, and although some at the most exclusive private clubs are unable to help non-members, they can recommend someone else. A few dollars well spent, whether in music, dancing, or golf, goes a long way.

Editor's Note:

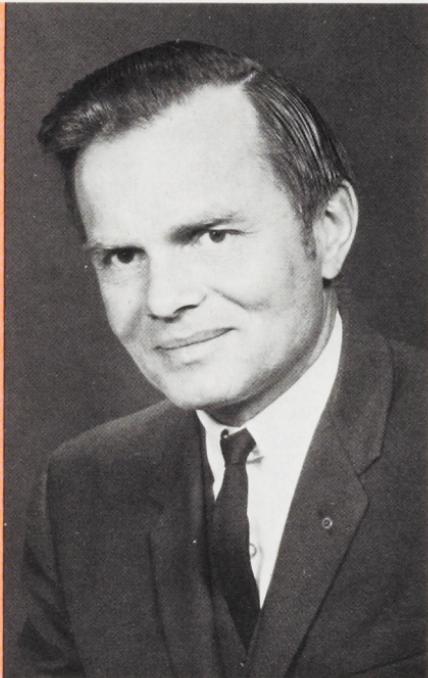
Mr. Patterson has agreed to contribute a series of helpful hints to golfers in succeeding issues. His first tip (above) however, is well worth considering.

Dr. Voss, former director, Metropolitan Winnipeg zoo; Now in charge of development, Metropolitan Toronto zoo.

The ZOO of the FUTURE

by Dr. Gunter Voss

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with permission.*



FEW are the events when a zoo man who has been in the profession for twenty-eight years returns from a conference truly enriched and inspired. The symposium on "The Zoo of the Future" was one of them.*

The Metropolitan Corporation of Greater Winnipeg allowed me time off to attend. I had the honour of serving on the various panels. Mr. George B. Bartholick acted as the general moderator. He is the gentleman charged with the design of suitable wild animal environments under human management in the

Washington State area. Specifically, this may mean the rebuilding of Woodland Park Zoo of the City of Seattle and the creation of a rare animal breeding centre in the near-desert area of the interior of the State of Washington, but it could also mean the design of entirely new institutions. Mr. Bartholick attended every session with his charming wife and his dedicated team. All of us zoo heads were tremendously impressed by the intelligent, searching questions Mr. Bartholick asked us and by his and his team's honest desire to listen and to learn.

From as far away as Zululand, Natal, Republic of South Africa, the Chief Conservation Officer, Ian C. Player had come. From Britain, Reginald Bloom, General Curator of the Windsor Lion Safari Zoo and famous Jimmy Chipperfield attended. While his brother controls the circus enterprise, Jimmy runs one Lion Safari institution each in Australia, Canada, England and Holland, has another four in various stages of development — two in England, one in Germany and one in Scotland — and a further two planned. Lutz Ruhe had come from Oakland, California, where he owns a private zoo. His brother Hermann, with animal importation headquarters still at Alfeld, West Germany, controls four zoological parks; the traditional zoos of Hanover and Gelsenkirchen in Germany, a drive-through zoo at Thoiry near Paris and another one on Mallorca, a Spanish island in the western Mediterranean.

A goodly number of architects, engineers and landscape architects had been attracted to the symposium and groups which might well be termed surprise groups even to the zoo buff. I want to single out the energetic men from Spokane, Wash. who had formed a zoo society and had begun zoo planning with emphasis on thoroughness and good taste. They showed slides of a site, available for zoo development east of Spokane, so beautiful that its beauty should dictate the type of development.

Zoo and aquarium folks in the Northwestern United States boast of a very fortunate situation, namely that the aquarium and zoo societies of Portland, Tacoma, Seattle, Vancouver and Spokane are all friendly and helpful with each other. Further, the populations of major

cities favour zoological developments, as demonstrated by the large support for "forward thrust" bond moneys. So there is a most encouraging climate in these respects.

Great zoological parks, once a status symbol of royalty, have become status symbols of communities.

Municipal councils will probably insist on the traditional, "well-rounded" zoo animal collection, but entrepreneur, society-controlled and hobbyists' institutions would be wise to advertise themselves by their specialties. The call was often heard: Specialize, settle for a smaller mission. Use museum techniques to an advantage to tell the animals' story. Specialization need not mean restriction; not impoverishment, but possibly expansion, most surely enrichment. Zoos and aquariums should have firm, indisputable answers as to why they obtain certain animal species and should not lame-ly reply that they "were available."

It is better to run a small institution of high quality than a shoddy, big one. It's excellence that brings your visitors back.

Why zoos? As well as natural history museums, zoos have a cultural mission. They allow us to study ourselves as we study animal behaviour. They teach man, through animals, to begin to understand himself.

To emphasize the dignity of the animals in all exhibits, is of basic importance. It is the principal failure of shows in carnival style that they take away just that.

A discussion ensued on mechanical rides. The panel leader summarized what had been expressed, in these remarks: "What kind of experience do we want to give our visitors? AN ISLAND OF SANITY IN A CRAZY WORLD! How

do they absorb driving; how much walking? And what is better? I question the aesthetics. Have we set out to run a carnival?" Quiet boat rides and transportation using ponies, llamas and camels were favoured, however.

In just about every zoo, losses of animal life have occurred from feeding by the public. The need was expressed for a sign without text, a symbol-type sign which would be internationally understood to express "Do not feed the zoo animals."

Another sign of this style should be internationally developed that would say "Do not litter."

The need for better cooperation from highway departments was strongly felt to mark exits to zoos and aquariums from interstate, national and state/provincial routes. Again a generally understandable symbol might serve usefully.

People must come in fair numbers so that there be funds to run the aquarium or zoo. Dr. Charles R. Schroeder, Director of the San Diego Zoo, the biggest wild animal exhibition anywhere, presented some impressive facts. More than three million people come to visit his zoo per annum. Membership in the San Diego Zoological Society stands at 21,000. Through the last five years, the operating budget has risen 10 to 12% annually. More attractions, bringing more visitors, must make up for it. Visitors to the San Diego Zoo stayed an average of two hours ten years ago; now they stay for three and a half hours. The Zoological Society operates the zoo in its entirety; there are no concessions. There is no depreciation account in the zoo budget.

The San Diego Zoological Society is in the process of developing a huge zoological park for the exhibit

of herd animals in large paddocks. This new enterprise, located in the San Pasquale valley near the city limits of San Diego, is estimated to cost ten million dollars and is scheduled to open to the public in January of 1972. It will provide 10,000 car parking lots.

Another major American zoo mentioned an example to illustrate the importance of internal auditing. Customarily the operator of the balloon concession had been granted an allowance of 35% for breakage. The new zoo director had this situation checked and found the figure to be far from real. He dismissed the operator, and the new one gets along fine with a breakage rate of 5%.

At the same zoo, marshmallows and plastic bags were thrown into the polar bear moat in such vast quantities that they entirely blocked all outlets. The moat filled with water overnight. The polar bears comfortably swam across and walked over the zoo. Marshmallow sales were halted because the loss of \$20,000 (twenty thousand dollars) in revenue hurts less than to have polar bears wander free.

Every car that enters the grounds at Jimmy Chipperfield's Lion Safari animal park at Rockton, Ontario, Canada, is charged an even four dollars. Visitors who desire to go on a boat ride pay for that separately, and the ones who wish to stroll through the petting zoo pay once again. Zoological gardens that want to attain some degree of independence from politically controlled budget strings will take notice. The quibbling over dimes and quarters when it concerns zoo admission charges, is bound to appear outdated before too long. Why continue to struggle whether certain low income groups should have free

or reduced admission fees? Why continue to tempt youngsters to tell the cashier a lie about their age? Why have angry waiting queues at the cashier's booth? All of this can be done away with when a nice, round charge is made per car. (And unaccompanied youngsters are denied admittance.) There need not be a waiting line of cars either. You sell your parking tags for the day at one, two or three convenient locations inside the zoo, and no car driver is let out who hasn't bought one.

Per capita standing figures were presented. Every person entering Disneyland leaves \$10.00 behind; every one visiting Marineland on the Pacific leaves \$7.50; at San Diego zoo the figure is \$2.10 and at Cleveland zoo \$.94.

"But when it comes to financing research and educational programs in zoos," Dr. Crowcroft of Brookfield zoo remarked with a sigh, "our handicap is cultural inertia. Unless," he added, "you sell immortality in the form of scientific publications with the sponsor's name on the outside."

Chief Conservator Ian C. Player appealed to all zoological societies to assist international wildlife conservation. In no way could they do this better, he said, than through guided tours to game reserves overseas.

With a potpourri of slides, taken in a multitude of zoos in a variety of countries and continents, Mr. George B. Bartholick started the first session on the evening of our arrival. The slides followed upon each other so rapidly that the effect was somewhere between a movie and psychedelic showing. But the message was clearly noted — that our symposium was to cover every conceivable aspect of zoo design

and operation that could possibly be squeezed into the few days of the symposium. Questions of very real concern arose right in the first session. Can you safely use overflow water from one animal enclosure in another one? Is there such a thing as truly good artificial rockwork? How do they close off an animal domain valley that experiences a flood every year? Some of these questions and a few more, I am ashamed to admit, remained unanswered when the symposium ended.

But whenever we dealt with the subject of zoo design in a stricter sense, a few essential rules emerged time and again. A really good zoo animal habitat can only be developed by or in very intensive cooperation with an experienced zoo biologist. No one else is capable of providing the basic needs for the animals' physical and mental health, for their privacy and their readiness to reproduce. If in addition, a keen sense of good taste prevails, such a zoo is bound to become outstanding, whether it be large or small. What matters is the right balance of practicality and beauty or, in other terms, of efficiency and taste. The able guidance by a zoo biologist and the decision-making by him are of utmost importance.

The San Diego zoo designer spoke of the desirability of a quiet transition area between the car park and the first major animal exhibit. If this highly recommendable zone could become educational, for instance through effective ways of exhibiting microscopic life, an "introduction to life" theme would condition zoo visitors for the experience awaiting them. Possibilities along these lines, have, as yet, not been utilized at all.

So it went on from session to

session: New questions, new thoughts, new prospects. The exchange of ideas went right on in the few minutes between sessions and deep into the nights. Upon asking, I received two excellent suggestions as to the most unobtrusive ways of confining elephants. I simply cannot picture an intelligent person who did not leave this symposium enriched.

Some proposals heard are, by necessity, unobtainable for the individual zoo man at his place of work; the reasons may be funding,

climate or other ones. I was blessed to be led down to earth by a very fine experience in Vancouver harbour between flights, when I had the pleasure of seeing off some surplus specimens from our zoo in Winnipeg — a gibbon, collared peccaries, cinnamon bears and Canadian porcupines — aboard the motor vessel "Crusader", destined for a zoo in New Zealand.

*ORGANIZED BY The Seattle Zoological Society and held from 16 to 18 January, 1970.



Arundel Cub Pack—with bus driver Al Hamilton in the background—after a visit to Fort Rouge Transit Base.

THEN . . . and NOW

Winnipeg's Street Painting Program in 1948

Miles of Street Painted
Miles of Lane Line Applied
Number of Intersections
Painted

The 1969 Metro Program

Miles of Street Painted

Miles of Lane Line Applied
Number of Intersections and

Corridors Painted 505

Average Number of
Applications Per Year 1.9

Number of Gallons of
Paint Used 9,300

Total Cost of the Program ..\$62,000

THE WAY TO GIVE

by Peter Gudmundson

WE all like to read and hear about activity in our community, but most of all—we like to see. With this in mind, a tour of a United Way Agency—the Society for Crippled Children and Adults—was taken by the employee representatives of the Metro Employees' Charity Fund.

Through this tour, our representatives were able to see first hand how the contributions collected are put to use. From viewing-rooms beside the classrooms they could see the actual work being done with children who were born with disabilities of co-ordination, hearing or walking. They were also given the opportunity to enter the classrooms and speak to the teachers—specially trained social workers—and had still another chance to see the wonderful work being done with the children.

For the benefit of those employees who may not be aware of the fund the following questions and answers may be of interest:

What is the Metro Employees' Charity Fund?

It is a fund formed by the employees to take care of their monetary donations to charitable appeals.

Who runs the fund?

The M.E.C.F. is administered by a committee whose members are elected from each division to represent the employees in the division.

Who can become a member?

Any member of the Metropolitan Corporation of Greater Winnipeg staff, permanent or temporary, may join. Membership is strictly voluntary.

What are the advantages of membership?

All requests for donations are made to the M.E.C.F. Committee which investigates each appeal and makes a donation according to the merits of each. "YOU ARE NOT BOTHERED BY CANVASSERS FOR EVERY FUND RAISING CAMPAIGN."

How do I become a member?

As membership in the Fund is voluntary, you must fill out a card authorizing the deduction of a designated amount from each pay cheque. These cards are available from the Personnel Department or from any of the M.E.C.F. Committee.

How and where is the money distributed?

The M.E.C.F. makes donations based on estimated annual receipts from its members, according to the size, the scope, and the needs of groups requesting donations. A complete list of donations is given annually to each member.

How much do I have to contribute if I join?

Each member who authorizes at least $\frac{1}{3}$ of 1% shall be given an annual membership card.

Are contributions deductible from income tax?

Yes—your total contribution for the year, as shown on your T-4 slip, is deductible for income tax purposes.

Transit's New Home Hosts a Host

It's a mobile world, and part of our security is on wheels. Drivers like to know what goes on at their service station. Bus riders enjoy checking the care given their means of transportation, too.

METRO'S invitation to groups of citizens to our the facilities at the Fort Rouge Transit Base has drawn wide acceptance. The tours, which started in January, sometimes averaged three or four each week.

In the first two months more than 800 citizens had toured the base.

A wide cross section of citizens were represented by the groups. The tour was especially popular among the young people's organizations such as Cubs and Scouts. Also taking advantage of the tour were members of Senior Citizens organizations; The Institute for the Blind; the Society for Crippled Children and Adults; the School for the Deaf; The Red River Community College; Y.M.C.A. and a number of business, professional and recreational organizations. Some of the tours were conducted during working hours and others in the evening.

The tours are arranged through the Publicity Branch. Members of the Publicity and Maintenance Branches act as tour guides.



Photo shows George Mitchell—Blacksmith Shop Foreman, speaking to a group of interested visitors from the Society for Crippled Children and Adults.

So Long . . .

Eileen Colvin

*It's been good
to know you*



ON April 4th, 1930, a young lady filled out an application for a comptometer operator job in the Timekeeping Department of the Winnipeg Electric Railway — she filled this position and now some 40 years later has said her adieu's. Now she starts a whole new life of fun and leisure. This young lady, Eileen Colvin of the Accounting Department, Assistant to the General Time-keeper, put in many years, months, days and hours just trying to get everyone's regular and overtime pay, deductions etc. ready for each and every employee on pay days. She has worked with many people and at various locations. Starting in the dirty thirties as a comptometer operator working with Mr. Robert Kertcher (still with us in the Accounting Department) helping him to keep things on the straight and narrow. After Mr. Kertcher moved to the Accounting section, Mr. Hugh

Denovan became General Time-keeper. Eileen became his assistant in 1952, and remained in that position until the present day. She has worked in various places starting out on the 11th floor, Winnipeg Electric Chambers Building, moving in 1955 to 10 Fort Street, 2nd floor, staying there until 1960, when the department once again moved, this time to 100 Main Street. In the fall of 1969 came the move to her present location at 10 Fort Street, main floor.

The employees of the Corporation honored Eileen on April 27, 1970 with a dinner at the Dakota Motor Hotel. A gold watch was presented to her and Eileen was able to sit back and chat with friends she has not been in contact with for a few years.

“So Long It's Been Good to Know You, Eileen.”
Happy Retirement Days.

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